Comments of the
Independent Petroleum Association Of America
On the Proposal by
Minerals Management Service
To Amend Regulations Clarifying
The Methods by which Gas Royalties and Deductions

For Gas Transportation Are Calculated

The Independent Petroleum Association of America ("IPAA") hereby submits the following comments on MMS' proposed amendments to regulations clarifying the methods by which gas royalties and deductions for gas transportation are calculated.

II. INTRODUCTION

IPAA is the nationwide trade association of approximately 5500 members that represents the interests of independent domestic natural gas and crude oil producers. Independent producers in the aggregate drill 85 percent of the new domestic wells each year and produce 64 percent of the natural gas produced in the United States. The vast majority of IPAA's member companies (66 percent) have fewer than 20 employees.

Comments regarding this document should be directed to:

Ben Dillon
Director, Public Resources
Independent Petroleum Association of America
1101 16th Street, N.W.
Washington, D.C. 20036
(202) 857-4722

MMS proposes to amend its product valuation regulations to provide that federal and Indian lessees are obligated to market natural gas and gas plant products at no cost to their federal and Indian lessors. 30 CFR §206.152(i), §206.153(i), §206.172(i) and §206.173(i). This newly created obligation is then cited as the basis for the proposed disallowance of "nonallowable costs" in determining transportation allowances under proposed 30 CFR §206.157(g) and §206.177(g). The purpose of these comments is to focus on and state IPAA's strong opposition to (1) the proposed creation of a new obligation on the part of federal and Indian lessees to market gas and gas plant products at no cost to their federal and Indian lessors, and (2) the potential retroactive application of the obligation. Specifically, it is IPAA's position that the creation of such a new obligation is unlawful as is the retroactive application of any final regulation.

II. THE PROPOSED REGULATION CREATES A NEW OBLIGATION

Under existing regulations, federal and Indian lessees have an obligation "to market the production for the mutual benefit of the lessee and the lessor" and they have an obligation "to place [production] in marketable condition at no cost to the Federal Government or Indian lessor unless otherwise provided in the lease agreement." 30 CFR §206.152(b)(1)(iii), (i), §206.153(b)(1)(iii), (i). The lessees do not, however, have an obligation to market production at no cost to their lessors.

MMS attempts to disguise the fact that a new obligation is being created in two ways. First, MMS mistakenly equates the obligation to place production in marketable condition with the obligation to market. MMS asserts, in the preamble to the proposed regulations, that since the former must be done at no cost to the lessor, the latter also must be done for free:

For decades, the regulations required that the lessee place production <u>in</u> <u>marketable condition</u> at no cost to the lessor. Thus, if the purchaser incurs costs <u>to market</u> the production, the lessee may not reduce the royalty value (either directly or through the transportation allowance) to compensate the purchaser for those marketing costs.

61 FR at 39934 (emphasis added). To put production in a marketable condition, however, is only one small part of marketing that production. Transportation, which is a function of getting production to a market, can be a significant cost and is deductible. It does not logically follow that all marketing costs must be borne by the lessee just because the costs of getting production in a marketable condition are recognized as being the lessee's responsibility.

Second, MMS asserts that the obligation to market federal and Indian lease production at no cost to the lessor is simply a corollary of the lessee's existing implied obligation to market the lease production for the mutual benefit of both itself and its lessor. The preamble explains:

MMS believes that the added language contains the concept embodied in the implied covenant to market for the mutual benefit of Federal and Indian oil and gas leases.

61 FR at 39935. The proposed regulation, however, is actually inconsistent with the implied covenant on which MMS relies, since "for the <u>mutual</u> benefit" of both parties does not mean that one party gets a free ride while the other party bears all the expense.

A. The Obligation to Place Production in Marketable Condition at No Cost to the Lessor Cannot be Expanded to Encompass all Marketing Costs

The limited obligation to put production in marketable condition at no cost to the lessor has never before been equated with a broad, all encompassing obligation to market for free, at least not in the agency's duly promulgated regulations. MMS' current regulations, for example, define the phrase "marketable condition" as "lease products which are sufficiently free from impurities and otherwise in a condition that they will be accepted by a purchaser under a sales contract typical for the field or area." 30 CFR §206.151. Notably, this definition focuses on (1) the <u>physical condition</u> that the production must be in, (2) so that it can be marketed under contracts <u>typical for the field or area</u> in which the production occurs.

Thus, under the current "marketable condition" regulation, the only thing that a lessee is required to do at no cost to the lessor is to place the production in the physical condition necessary to market it under contracts typical for the field or area. The cost of marketing efforts beyond placing the production in marketable condition at or near the lease, especially the cost of marketing efforts incurred in order to obtain higher prices for the lease production many hundreds of miles away from the field or area where it was produced, such as transportation, is not even remotely contemplated by the marketable condition rule, either in its present form or as it has evolved throughout its history.

The obligation to put gas into marketable condition originally was found in two Department of the Interior regulations. The first provision, 30 CFR §221.31, effective June 1, 1942, was originally published at 7 FR 4132, 4137. That provision, which governed federal onshore leases, stated:

Emulsion and dehydration. The lessee shall complete and maintain his wells in such mechanical condition and operate them in such manner as to prevent, as far as possible, the formation of emulsion, or so-called B.S., and the If the formation or emulsion, or B.S., or the infiltration of water. infiltration of water, cannot be prevented or if all or any part of the product is unmarketable by reason thereof or on account of any impurity or foreign substance, the lessee shall put into marketable condition, if commercially feasible, all products produced from the leased land and pay royalty thereon without recourse to the lessor for deductions on account of costs of treatment or of costs of shipping. To avoid excessive losses from evaporation, oil shall not be heated to temperatures above the minimum required to put the oil into marketable condition. If excessive temperatures are required to break down any emulsion, then other means of dehydration must be utilized. Under such circumstances the supervisor must be consulted, and his approval obtained. (Emphasis added).

This provision remained in effect until October 27, 1982, when Part 221 was "revised and modernized." 47 FR 47758 (Oct. 27, 1982). The revision and modernization process essentially removed the old §221.31. Then, on August 12, 1983, §221.31 was redesignated as 43 CFR §3162.5-3. 48 FR 36583 (Aug. 12, 1983). Today it is found in 43 CFR §3162.7-1(a), which provides: "The operator shall put into marketable condition, if economically feasible, all oil, other hydrocarbons, gas, and sulphur produced from the leased land."

The offshore counterpart of this regulation was promulgated in 1954 as part of the regulations adopted to implement the Outer Continental Shelf Lands Act. As originally promulgated, the regulation provided:

Emulsion and dehydration.

- (a) The lease shall complete and maintain all oil wells in such mechanical condition and operate them in such manner as to prevent, so far as possible, the formation of emulsion and basic sediment.
- (b) The lessee shall put in marketable condition, if commercially feasible, all products produced from the leased land and pay royalty thereon without recourse to the lessor for deductions on account of costs of treatment.

30 CFR §250.41 (1954). This regulation, except for being redesignated as 30 CFR §205.42 in 1968, remained largely unchanged until the late '70's. Then, without explanation, in either the proposed rule, 44 FR 13527 (Mar. 12, 1979), or the final rule, 44 FR 61892 (Oct. 26, 1979), corrected, 45 FR 20465 (Mar. 28, 1980), the provision was revised to read:

The lessee shall put into marketable condition, if commercially feasible, all products produced from the leased land. In calculating the royalty payment, the lessee may not deduct the cost of treatment.

30 CFR §205.42 (1980).1

The second Interior Department regulation that historically contained an obligation to put gas in marketable condition was the regulation governing royalties due on processed gas. The original onshore provision, 30 CFR §221.51(b), effective June 1, 1942, was originally published at 7 FR 4132, 4138. It provided:

(b) The present policy is to allow the use of a reasonable amount of dry gas for operation of the gasoline plant, the amount allowed being determined or approved by the supervisor, but no allowance shall be made for boosting residue gas, or other expenses incidental to marketing.

30 CFR §221.51(b) (1942). This provision modified slightly and renumbered as 30 CFR §221.114 on October 27, 1982, when Part 221 was "revised and modernized." 47 FR 47775 (Oct. 27, 1982). Then, on August 5, 1983, §221.114 was redesignated as 206.106. 48 FR 35641 (Aug. 5, 1983). The offshore counterpart of this provision was promulgated

preamble generally explained that all of the changes were intended to "eliminate unnecessary and redundant provisions" and to ire organization and clarity. 44 FR 13528 (Mar. 12, 1979); 44 FR 61886 (Oct. 26, 1979).

in 1954 as 30 CFR §250.67(d), which provided with respect to royalty on processed gas that:

(d) No allowance shall be made for boosting residue gas or other expenses incidental to marketing.

30 CFR §250.67(d) (1954). This provision was redesignated as §206.152(d) on August 5, 1983. 48 FR 35641 (Aug. 5, 1983).

Effective March 1, 1988, the onshore and offshore provisions were both incorporated in a new §202.151(b), which currently provides:

A reasonable amount of residue gas shall be allowed royalty free for operation of the processing plant, but no allowance shall be made for boosting residue gas or other expenses incidental to marketing, . . .

53 FR 1271 (Jan. 15, 1988). While the term "marketing" is used in this regulation, MMS' intent, as revealed by the preamble to the 1988 rulemaking, clearly was not to encompass any and all marketing costs associated with the sale of residue gas, but only those "marketing" costs incidental to putting the residue gas in marketable condition. The preamble explained:

Several industry commenters stated that an allowance for boosting residue gas should be allowed under paragraph (b) for operation of the processing plant. The rationale was that costs associated with this process are incurred as a result of processing and should not be regarded as costs necessary to place the gas in marketable condition.

MMS Response: The regulations specify the MMS's policy that the lessee is required to condition the production for market. The cost of boosting residue gas is considered as a cost necessary to place the gas in marketable condition, and will not be an allowable deduction.

53 FR 1236 (Jan. 15, 1988).

In sum, there is no pre-existing regulatory support in the so-called "marketable condition" rule for imposing an obligation on federal and Indian lessees to provide free

services over and above placing the production in marketable condition. Under existing regulations, once production is in marketable condition, a federal or Indian lessee's obligation to provide free "marketing" services is at an end.

B. The Obligation to Market for the Mutual Benefit of the Lessor and Lessee Does Not Carry With it an Obligation to Market for the Lessor for Free

Federal and Indian lessees, like private lessees, unquestionably have an implied obligation to market lease production for the mutual benefit of both parties. Nevertheless, the implied obligation of a lessee to market for the mutual benefit of both itself and its lessor has never before been viewed as embodying the concept that this marketing must be done by the lessee for free. As one distinguished commentator observed:

The duty of the lessee to deliver royalty gas to the market or to market the gas in the sense of making a sale does not dispose of the question of which party should bear the cost incident thereto.

Kuntz, E., A Treatise on the Law of Oil and Gas, Vol. 5, sec. 60.1, p. 122 (1978). Rather, according to Professor Kuntz, the determination of who should bear a particular cost is governed by whether the cost is properly identified as a production cost or whether it is properly identified as a marketing cost, since the lessee traditionally bears production costs but shares marketing costs proportionately with the lessor. <u>Id</u>.

MMS may take the position that general oil and gas principals such as these do no apply to federal and Indian leases. Nevertheless, there must be some pre-existing source for the implied obligation that MMS claims to exist. An obligation is not "implied" simply because the agency says it is. And while MMS purports to rely on pre-existing jurisprudential authority for its assertion that there is an implied obligation on the part of federal and Indian lessees to market lease production for free, the only authority it cites is a

decision by the agency itself, i.e., the decision of the Interior Board of Land Appeals in Walter Oil and Gas Corp., 111 IBLA 265 (1989). Of course, the Interior Department cannot create lease obligations by adjudication any more than it can "imply" them by administrative fiat.²

Finally, the alleged existence of an implied obligation on the part of federal and Indian lessees to market lease production for free actually is inconsistent with the agency's duly promulgated regulations. Under the agency's published regulations, federal and Indian lessees are obligated to market lease production for the <u>mutual</u> benefit of <u>both</u> parties. See 30 CFR §206.152(b)(1)(iii) and §206.153(b)(1)(iii). "Mutual" does not mean that one party gets a free ride while the other party bears all the expense.

In sum, there is no existing obligation on the part of federal and Indian lessees to market lease production for free that goes beyond placing the production in marketable condition. The next question that must be addressed is whether or not such a new obligation can be created by regulation. As is discussed below, IPAA believes that the answer to this question clearly is no.

III. MMS CANNOT, BY REGULATION, IMPOSE A NEW OBLIGATION ON FEDERAL AND INDIAN LESSEES TO MARKET LEASE PRODUCTION FOR FREE

MMS' regulatory authority to determine the value of production on which royalties are due is limited by the governing statutes. Section 8(a) of the Outer Continental Shelf Lands Act requires the payment of royalty at a percentage "in amount or value of the production saved, removed, or sold from the lease." 43 USC §1337(a). Likewise, the

agency also cannot create new lease obligations by regulation, an issue discussed more fully below.

Mineral Lands Leasing Act requires the payment of royalty at a percentage "in amount or value of the production removed or sold from the lease." 30 USC §226(b). Where the MMS has attempted to impose royalties on something other than the value of the production saved, removed or sold from the leased premises, the courts have declared the agency's action to be in excess of its statutory authority. See, e.g., Diamond Shamrock Exploration Co. v. Hodel, 853 F.2d 1159 (5th Cir. 1988).

Under the proposed regulations here, MMS is attempting to impose royalties on the value of marketing services provided by lessees long after production is removed from the leased premises. In fact, if a lessee sells its production at the well and some unrelated third party performs marketing services that results in that third party receiving a higher price, the value of the marketing services still must be added to the value of the production on which royalties are due under the proposed regulations. See, e.g., proposed 30 CFR §206.152(i) ("Where the value established under this section is determined by a lessee's gross proceeds, that value shall be increased to the extent that the gross proceeds have been reduced because the purchaser, or some other person, is providing certain services the cost of which ordinarily is the responsibility of the lessee to place the gas in marketable condition or to market the gas.") (Emphasis added). This is clearly beyond the agency's statutory authority, which is limited to valuing the production when it is saved, removed, or sold from the lease.

Even if the addition of a new obligation to pay royalty on the value of services provided by a lessee (or third parties) after federal lease production has been placed in marketable condition and after it has been removed from the leased premises is not precluded by statute, it is not contractually authorized. Under most federal leases, Interior

does not have the contractual authority to unilaterally amend the royalty payment obligations established in the lease.³ Unless the lease expressly provides otherwise, the "property rights of the lessee are determined only by those rules in effect when the lease is executed." <u>Union Oil Co. of California v. Morton</u>, 512 F.2d 743, 748 (9th Cir 1975); see Pauley Petroleum, Inc. v. United States, 591 F.2d 1308, 1325-26 (Ct. C1. 1979), cert. denied, 444 U.S. 898 (1979). Moreover, the Fifth Amendment and fundamental due process also prohibit the United States from annulling previously created contractual rights. See, e.g. Perry v. United States, 294 U.S. 330, 353-54 (1935); <u>United States Trust Co. of New York v. New Jersey</u>, 431 U.S. 1, 26 n.25 (1977); <u>National Railroad Passenger Corp.</u> v. Atchison, Topeka & Santa Fe Railway Co., 470 U.S. 451, 471-72 n.24 (1985).

IV. THE PROPOSED REGULATION IS BAD POLICY

Even if the agency could lawfully promulgate a new regulation to create an obligation on the part of federal and Indian lessees to market lease production for free, it would be bad public policy for it to do so. First, since the extent of a lessee's new "marketing" obligation is not defined, auditors will be given virtually *carte blanche* to second guess whether the price obtained in any particular case was adequate, leading to uncertainty and confusion. Even more importantly, the policy underlying the agency's existing regulations, reliance on arm's-length prices in the marketplace to determine fair market value, is being abandoned and replaced with a new standard, the highest obtainable price, with no apparent explanation. An examples illustrates.

he federal leases provide that they are subject to all valid regulations promulgated by the Interior Department in the future. Many, he wer, do not.

Under current regulations, the gross proceeds received by Lessee A from its wellhead sale of federal lease production is acceptable for royalty purposes, absent proof by the agency that the lessee has engaged in misconduct. Under the proposed regulation, however, if Lessee B sold comparable gas further downstream for a higher price, it might be said that the price received by Lessee A was reduced because its purchaser was providing services that Lessee A was obligated to provide for free, i.e., the services that Lessee B provided in order to collect a higher price. Indeed, any arm's-length wellhead sale to a pipeline or marketer arguably will be subject to challenge because these purchasers are in the business of incurring additional marketing costs in order to resell the gas at a profit. Thus, the price a lessee receives from a pipeline or marketer almost always will be reduced because these purchasers are providing marketing services that enable them to receive a higher price when they resell the gas. That's why they are in business. This, however, has nothing to do with the value of federal lease production at the lease.

Under the proposed regulation, the highest obtainable price for comparable gas, whether received in a comparable sale of gas or near the lease or in a downstream resale of gas at the burnertip, will become the royalty determinant, replacing the current standard of the lessee's arm's-length gross proceeds. Similarly, the agency's current acceptance of non-arm's-length sales prices if they are within the range of comparable arm's-length sales prices will have to be abandoned. So long as comparable gas is sold anywhere to anyone at a higher price, an argument might be made that the lessee received a lower price because the purchaser (affiliated or not) provided "marketing" services that the lessor was entitled to receive for free.

Even if the agency had the statutory and contractual authority to move the royalty valuation point for federal leases downstream of the lease (for the reasons discussed above, IPAA believes that it does not), these are major changes to the existing regulatory scheme that should not be adopted without careful consideration. Moreover, the regulated community is entitled to a reasoned explanation of why the agency is now choosing to abandon the fundamental basis for the valuation regulations that have been in effect since 1988 and that were adopted only after years of careful thought.

V. MMS MAY NOT APPLY THE PROPOSED REGULATION RETROACTIVELY

MMS proposes to make the changes to the valuation and transportation rules effective May 18, 1992, the effective date of FERC Order 636. MMS says it wants to avoid any potential inequities for those lessees already operating in the FERC Order 636 environment. Some changes may have occurred in the gas market before FERC Order 636. MMS has requested comment on whether an earlier retroactive effective date is appropriate. IPAA's view is that no retroactive effective date is acceptable; indeed, our view is that the substance of the proposal itself cannot lawfully be made without specific authorization by the legislative branch and certainly not based on a wholly unrelated action by independent federal agency.

FERC Order 636 was issued in May 1992, but was not implemented until November 1993 (and later). Lessees continually sought advice from MMS regarding MMS' position on FERC Order 636's royalty ramifications from mid-1993 forward. No agency guidance was provided until the present.

It is IPAA's position that the MMS' July 31, 1996 proposed rulemaking is a substantive rulemaking under the "legal effect" test in American Mining Congress v. Mine Safety and Health Administration, 302 U.S. App. D.C. 38, 995 F.2d 1106, 1993 U.S. App. LEXIS 13767, 1993 O.S.H. Dec. (CCH) P 30096 (D.C. Cir. 1993). It is IPAA's position that MMS' action in promulgating its proposed rulemaking recognizes the substantive nature of its rulemaking. It did not rely on the interpretive rule, general statement of policy or rule of agency organization, procedure, or practice exemptions available to it under 5 U.S.C. §553(b)(3)(A) (1996) of the Administrative Procedure Act ("APA").

A. Determination of Whether a Rule is Substantive or Interpretive

The "legal effect test" in AMC, supra, considers four questions in determining whether a rule is legislative (i.e., substantive) or interpretive. The test is as follows:

(1) whether in the absence of the rule there would not be an adequate legislative basis for enforcement action or other agency action to confer benefits or ensure the performance of duties, (2) whether the agency has published the rule in the Code of Federal Regulations, (3) whether the agency has explicitly invoked its general legislative authority, or (4) whether the rule effectively amends a prior legislative rule. If the answer to any of these questions is affirmative, we have a legislative, not an interpretive rule. AMC at 1111.

First, without MMS' proposed rulemaking there would be no adequate legislative basis for enforcement or ensuring the performance of calculating and paying royalties in the manner specified in MMS' proposed rulemaking. Without MMS' amendments to 30 CFR §206.152(i), §206.153(i), §206.172(i) and §206.173(i), there would be no binding authority to require the lessees to market gas and gas plant products at no cost to the lessor. The agency's need to amend these sections by adding the words "and market the gas" and

"at no cost to the Federal Government" and "or to market the gas" is clear evidence of the "legislative gap" in the existing rules that needed to be filled in order to collect royalties in the manner set forth in MMS' proposed rulemaking.

Second, MMS' proposed rulemaking when finalized pursuant to the APA will be published in the Code of Federal Regulations.

Third, MMS invoked its general legislative authority to promulgate the amendments to, and additions to, Part 206 in its PR at p. 39937.

Fourth, MMS' proposed rulemaking effectively amends a prior legislative rule, in addition to adding new rules. The title of the proceeding is "Amendments to Transportation Allowance Regulations for Federal and Indian Leases to Specify Allowable Costs and Related Amendments to Gas Valuation Regulations." Further, the amendment action is clearly recognized in MMS' designation of the proposed rulemaking, in the body of the preamble and in the changes to the rules themselves.

Clearly, the answer to each of the four questions in the legal effect test of <u>AMC</u> are affirmative. Only one of the four needs be answered affirmatively. Therefore, we definitely have a legislative, i.e., substantive, not an interpretive rule.

B. Retroactive Application of a Substantive Rule

The leading case on the subject of retroactive application of a substantive rule is <u>Bowen v. Georgetown Univ. Hosp.</u>, 488 U.S. 204, 102 L.Ed. 2d 493, 1988 U.S. LEXIS 5554, 109 S. Ct. 468, 57 U.S.L.W. 4057 (1988). In <u>Bowen</u>, the Supreme Court clearly enunciated its position.

It is axiomatic that an administrative agency's power to promulgate legislative regulations is limited to the authority delegated by Congress. Bowen at 208.

The Court further stated:

Retroactivity is not favored in the law. Thus, congressional enactments and administrative rules will not be construed to have retroactive effect unless their language requires this result. [Citations omitted.] By the same principle, a statutory grant of legislative rulemaking authority will not, as a general matter, be understood to encompass the power to promulgate retroactive rules unless that power is conveyed by Congress in express terms. Bowen at 488 U.S. 208, 209.

Justice Scalia in his concurring opinion in <u>Bowen</u> further opined that the APA rulemaking requirements for substantive rules was controlling and dispositive in this case:

Given the traditional attitude towards retroactive legislation, the regime established by the APA is an entirely reasonable one: Where quasi-legislative action is required, an agency cannot act with retroactive effect without some special congressional authorization. That is what the APA says, and there is no reason to think Congress did not mean it. <u>Bowen</u> at 488 U.S. 224.

VI. IPAA'S CONCLUSION

It is IPAA's position that the creation of a new obligation is unlawful; additionally, MMS may not apply its proposed rulemaking retroactively for the following reasons: (1) Neither the Outer Continental Shelf Lands Act, the Mineral Lands Leasing Act, the various Indian Leasing Acts, nor the Federal Oil and Gas Royalty Management Act expressly delegate retroactive rulemaking authority to MMS in the exercise of its quasi-legislative authority in promulgating substantive rules, and (2) Retroactive application of substantive rules is not countenanced by the APA.

While MMS may desire to obtain "royalties" from the value added by non-production services between the lease and the burnertip, realizing that desire will require more innovation -- to say nothing of more statutory authority -- than demonstrated in the present, highly creative proposed rulemaking.

The challenge of expanding revenues by capturing downstream added value is one that independent producers also face in the rapidly evolving, highly competitive, deregulated natural gas marketplace. However, today as in the past, most independents' revenues depend upon sales at the lease. Independents, by and large, are not staffed or experienced in downstream sales activities. Moreover, many independents face structural problems; for instance, most independents have great difficulty aggregating sufficient supplies of natural gas to effectively compete with large third-party marketing firms in today's dynamic natural gas marketplace.

It is painfully clear those independents willing to take up the marketing challenge that substantial investments will be needed to acquire or develop and maintain marketing expertise. Imagine their surprise at learning that MMS now proposes to create an obligation on their part to provide those services, cost free, to the Federal government.

Current statute and lease terms provide MMS the option to take production in-kind in lieu of royalty payments. This requirement establishes the basis for determining proper value on production sold or removed from the lease. If MMS took its production in-kind at or near the lease the proceeds received from this transaction should be the basis for determining market value for the purpose of royalty payments. The proposed rulemaking is inconsistent with this basis for valuation by disallowing costs downstream of the lease. Given the burdens and disincentives created by the proposed rulemaking the IPAA reiterates its recommendation that MMS allow producers, at their election, to make royalty payments in kind.

Respectfully submitted,

The Independent Petroleum Association of America

By:

Ben Dillon

Director, Public Resources Independent Petroleum Association of America 1101 Sixteenth Street, N.W. Washington, D.C. 20036 (202) 857-4722